

**Application No.: 10/695,806**

**AMENDMENTS TO THE DRAWINGS**

Please replace the drawing sheet including FIG. 1 with the attached replacement sheet including FIG. 1A. Please add the drawing sheet including FIG. 1B as a new sheet. FIG. 1 has been amended to change the labeling of the figure to FIG. 1A. FIG. 1B is a new figure that is being submitted together with this Amendment as explained below.

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**REMARKS**

Claims 1-28 were presented for examination. Claims 1, 3-6, 8-18 and 20-25 were rejected. Claims 2, 7, 19 and 26 were objected to. Claim 1 has been amended. Claim 8 has been canceled without prejudice or disclaimer. Support for all amendments is found in the specification as originally filed. Reconsideration of this application and allowance of all pending claims are hereby respectfully requested in view of the following amendments and remarks.

**Objection to the Drawings**

The drawings were objected to for allegedly failing to show the all the claimed features. Specifically, the Office Action objected that the claimed "displacement measurement device" is not shown in the drawings. A new drawing sheet including FIG. 1B is being submitted together with this Amendment to address the Examiner's objection. FIG. 1B illustrates a displacement measurement device 140 coupled to the signal analyzer 150. Applicants' respectfully submit that FIG. 1B includes no new matter because the illustrated embodiment is a more generic representation of the embodiment shown in FIG. 1A. Further, FIG. 1B is congruent with the claim language and supported by the specification as originally filed. Accordingly, Applicants respectfully request entry of FIG. 1B, reconsideration and withdrawal of this objection.

**Objection to the Claims**

Claim 1 was objected to under 35 U.S.C. § 112 for failing to show a nexus between the preamble and the body of the claim. The Office Action contends that there is no relationship between the "engine cylinder contribution" recited in the preamble and the "engine block

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movement" recited in the body of the claim. Claim 1 has been amended to address the Examiner's concerns and to overcome the objection. Accordingly, Applicants respectfully request reconsideration and withdrawal of this objection.

**Rejection under 35 U.S.C. § 103**

Claims 1, 3-6, 8-18 and 20-25 have been rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent Application Publication No. 2004/0236494 (DeBotton et al.) in view of U.S. Patent No. 6,510,732 B1 (Liang et al.). The Office Action alleges that DeBotton et al. disclose each element of the claims, except for the feature of detecting engine cylinder block movement "relative to a stationary structure" or "relative to a fixed position." The Office Action relies upon Liang et al. to overcome the deficiencies of DeBotton et al. For at least the reasons stated below, the proposed combination of DeBotton et al. and Liang et al., even if proper, does not disclose or suggest all of the required claim elements.

The present invention as recited in amended claim 1, for example, relates to a system for evaluating engine cylinder contribution. The system includes a displacement measurement device configured to detect engine block movement relative to a stationary structure and a signal analyzer coupled to the displacement measurement device and configured to evaluate the engine block movement for determining engine cylinder contribution. One advantage of the present invention is that engine block movements are detected relative to a stationary structure to effectively determine engine cylinder contribution.

Even if the references were combined as suggested by the Office Action, the combination does not teach or suggest each of the claim elements. In particular, neither DeBotton et al. nor Liang et al. teaches or suggests a detecting of engine block movement "relative to a stationary

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